

WHAT IS CLAIMED IS:

1. A drive over conveyor pit comprising:

a mainframe comprising:

a plurality of drive over sections each comprising a first end and a second end;

5 a grain pit located between and adjacent to said plurality of drive over sections;

a front; and

a rear;

10 a plurality of entrance ramps, one said ramp pivotably attached to each said first end of said drive over sections;

a plurality of exit ramps, one said ramp pivotably attached to each said second end of said drive over sections;

a hydraulic front lift assembly coupled to said front of said mainframe; and

15 a hydraulic rear lift assembly attached to said rear of said mainframe.

2. A drive over conveyor pit according to Claim 1 wherein said hydraulic front lift assembly and said hydraulic rear lift assembly are configured to allow said mainframe to be lowered to a ground surface.

20 3. A drive over conveyor pit according to Claim 2 wherein said hydraulic front lift assembly and said hydraulic rear lift assembly are configured to raise and pivot away from said mainframe when said mainframe is lowered and contacts a surface, thereby providing a non-obstructed path across said ramps and said end sections.

4. A drive over conveyor pit according to Claim 3 wherein said hydraulic front lift assembly and said hydraulic rear lift assembly comprise tires mounted on one of a wheel assembly or caster wheel forks.

5 5. A drive over conveyor pit according to Claim 4 wherein said hydraulic front lift assembly comprises an axle frame, said caster wheel forks rotatably mounted to said axle frame, said axle frame pivotably mounted to said transition housing.

6. A drive over conveyor pit according to Claim 1 further comprising a transition housing, said transition housing configured to couple said hydraulic front lift assembly to said front of said mainframe.

7. A drive over conveyor pit according to Claim 6 wherein said hydraulic front lift assembly comprises:

a first caster wheel fork;

a second caster wheel fork;

a left axle frame; and

a right axle frame, said first caster wheel fork rotatably mounted to said left axle frame, said second caster wheel fork rotatably mounted to said right axle frame, said left axle frame and said right axle frame pivotably mounted to opposite sides of said transition housing.

8. A drive over conveyor pit according to Claim 6 wherein said transition housing is configured to connect to a feed chute of a grain auger.

9. A hydraulic lift assembly for a drive over conveyor pit comprising:

a plurality of axle frames configured to be pivotably mounted to the drive over conveyor pit;

a plurality of caster wheel forks configured to be rotatably mounted to said axle frames, one of said caster wheels forks rotatably mounted to each said axle frame;

5 a plurality of tires configured to be mounted to said caster wheel forks;
and

a hydraulic piston system comprising at least one hydraulic piston, said system attached to said axle frames and configured to cause the drive over conveyor pit to be raised and lowered through extension and retraction of the piston, extension and retraction of the piston causing said axle frames to pivot at the mounting to the pit.

10 10. A hydraulic lift assembly according to Claim 9 comprising:

a transition housing; and

two said axle frames, each said axle frame configured to be pivotably mounted to opposite sides of said transition housing.

15 11. A hydraulic lift assembly according to Claim 10 wherein said two axle frames are configured to operate through mechanical attachment to a single hydraulic piston.

20 12. A hydraulic lift assembly according to Claim 10 comprising two hydraulic pistons, each said axle frame configured to be mechanically attached to one of said pistons, each piston and axle frame combination operable separately.

13. A grain transfer system comprising:

a drive over conveyor pit; and

a grain auger comprising a feed chute, said drive over conveyor pit comprising,

25 a mainframe comprising:

a plurality of drive over sections each comprising a first end and a second end;

a grain pit located between and adjacent to said plurality of drive over sections;

5 a front; and

a rear;

entrance and exit ramps pivotably attached to said drive over sections;

a transition housing attached to said front of said mainframe and configured for mechanical attachment to said feed chute; and

a hydraulic front lift assembly attached to said transition housing; and

a hydraulic rear lift assembly attached to said rear of said mainframe.

15 14. A grain transfer system according to Claim 13 wherein said hydraulic front lift assembly and said hydraulic rear lift assembly are configured to allow said mainframe to be lowered to a surface.

15 15. A grain transfer system according to Claim 14 wherein said hydraulic front lift assembly and said hydraulic rear lift assembly are configured to lift and pivot when said mainframe contacts the surface.

20 16. A grain transfer system according to Claim 13 wherein said hydraulic front lift assembly and said hydraulic rear lift assembly comprise tires mounted on caster wheel forks.

17. A grain transfer system according to Claim 16 wherein for said hydraulic front lift assembly said caster wheel forks are rotatably mounted to an axle frame, said axle frame pivotably mounted to said transition housing.

5 18. A grain transfer system according to Claim 17 wherein said hydraulic front lift assembly comprises:

a first caster wheel fork;

a second caster wheel fork;

a left axle frame; and

10 a right axle frame, said first caster wheel fork rotatably mounted to said left axle frame, said second caster wheel fork rotatably mounted to said right axle frame, said left axle frame and said right axle frame pivotably mounted to opposite sides of said transition housing.

15 19. A grain transfer system according to Claim 17 further comprising a telescoping track bar, said auger comprising a frame member, said track bar configured to be attached between said drive over conveyor pit and said frame member, said track bar configuring said system to allow said pit and said auger to be towed substantially parallel to one another using a single vehicle.

20. A grain transfer system comprising:

a drive over conveyor pit; and

20 a grain auger comprising a feed chute, said drive over conveyor pit comprising,

a mainframe comprising:

a plurality of drive over sections each comprising a first end and a second end;

a grain pit located between and adjacent to said plurality of drive over sections;

a front; and

a rear;

5 entrance and exit ramps pivotably attached to said drive over sections;

a hydraulic front lift assembly attached to said front of said mainframe; and

a hydraulic rear lift assembly attached to said rear of said mainframe.

21. A grain transfer system comprising:

a drive over conveyor pit; and

a grain auger comprising a feed chute, said feed chute comprising a discharge end, said drive over conveyor pit comprising:

15 a mainframe comprising:

a plurality of drive over sections each comprising a first end and a second end;

a grain pit located between and adjacent to said plurality of drive over sections;

20 a front; and

a rear;

entrance and exit ramps pivotably attached to said drive over sections; and

5 a mechanical linkage comprising a first end and a second end, said linkage intermediate said auger and said discharge end of said feed chute, said feed chute mechanically attached to said drive over conveyor pit, said mechanical linkage configured to raise said feed chute and said drive over conveyor pit above a portion of said grain auger for transport.

22. A grain transfer system according to Claim 21 further comprising a hydraulic cylinder mechanically attached to said mechanical linkage.

23. A grain transfer system according to Claim 22 further comprising a pivot pin, said pivot pin configured to mechanically connect said mechanical linkage to said auger at said first end of said linkage.

24. A grain transfer system according to Claim 23 further comprising a connecting strap, said strap configured to mechanically connect said second end of said mechanical linkage to said feed chute, said connecting strap configured to enable movement of said drive over conveyor pit to a position above said grain auger.

25. A grain transfer system according to Claim 24 wherein said hydraulic cylinder is configured to cause said second end of said mechanical linkage to move in a circular arc, the movement of said second end causing at least one of said drive over conveyor pit to raise to a position above a portion of said grain auger for transport, and a lowering of said drive over conveyor pit from the position above the portion of said grain auger to an operating position.

26. A grain transfer system according to Claim 25 further comprising a wheel assembly, said wheel assembly attached to said drive over conveyor pit at an end opposite said feed chute and said mechanical linkage.

27. A grain transfer system according to Claim 21 wherein said drive over conveyor pit comprises a hitching mechanism, said hitching mechanism attached to said drive over conveyor pit at an end opposite said feed chute and said mechanical linkage, said hitching mechanism configured to attach to a towing vehicle.

28. A grain transfer system according to Claim 21 wherein said hitching mechanism is configured to attach to a three point hitch of a tractor.

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